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(54) Title: STAPHYLOCOCCAL NUCLEASE FUSION PROTEINS FOR THE PRODUCTION OF RECOMBINANT PEPTIDES

(57) Abstract: Peptides are produced as fusions with a suitable carrier protein. The carrier protein disclosed herein are adapted from the N-terminal domain of staphylococcus nuclease. This novel carrier protein acts to promote the over-expression of the peptide-protein fusion in the form of inclusion bodies, which minimizes in-cell proteolysis of desired peptides. The fusion protein is readily purified by conventional procedures or His-tag affinity chromatography when His-tag is inserted into the fusion protein. The target peptide is released from the purified fusion protein by a simple cleavage step and separated from the librated carrier protein by use of a reverse-phase HPLC process or by repeating the same affinity purification method. A particular advantage of the disclosed method, in addition to the obvious advantage of high yields, is its use for producing isotopically labeled peptides for NMR characterization of bioactive peptides and their interactions with target proteins.